

*Revised
by Inventor*

WHAT IS CLAIMED IS:

1. A process for the production of plants with improved growth characteristics which comprises the following steps:
 - transfer and integration of a DNA sequence coding for a bacterial asparagine synthetase in the plant genome
 - wherein said DNA sequence is linked to a regulatory sequence which ensures expression of said gene in a plant cell and leading to the import of the derived protein into the chloroplasts and/or plastids of said plant cells and
 - regeneration of intact and fertile plants from the transformed cells.
2. A plant cell expressing a prokaryotic ammonium specific asparagine synthetase in its chloroplasts and plastids.
3. A plant cell according to claim 2 expressing further a gene construct leading to reduced level of its endogenous glutamine synthetase activity.
4. A plant, seeds and propagation material containing cells as claimed in claims 2 and 3.
5. A gene construct comprising a gene encoding a prokaryotic ammonium specific asparagine synthetase operatively linked to a regulatory sequence which ensures expression of said gene in a plant cell and leading to the import of the derived protein into chloroplasts and/or plastids of said plant cell.

6. A gene construct according to claim 5, wherein the asparagine synthetase gene is an E.coli asparagine Synthetase gene with a chloroplastic leader peptide at its N-terminus.
7. A vector containing a gene construct according to claims 5 and 6.
8. A plant cell transformed with the gene construct according to claim 5 and 6 or with a vector according to claim 7.